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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,656	10/30/2003	Terry Tarn	P106-US	3766
26148	7590	10/04/2004	EXAMINER	
REFLECTIVITY, INC. 350 POTRERO AVENUE SUNNYVALE, CA 94085			MANDALA, VICTOR A	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,656

Applicant(s)

TARN, TERRY

Examiner

Victor A Mandala Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 10-14, 19, 21, 23-34 and 39-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 15-18, 20, 22 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/30/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Election/Restrictions***

1. Applicant's election with traverse of Species III Figures 3A-B in the reply filed on 7/7/04 is acknowledged. The traversal is on the ground(s) that the devices disclosed are exemplary embodiments of the invention, but should not be interpreted as limitations to the present invention. This is not found persuasive because the Species are distinct modifications, which would be a burdensome search for the examiner as stated in the restriction. The examiner also wants to make a note that the Applicant agrees that the species are distinct modifications, hence different species, (Applicant's response to the election requirement filed on 7/7/04 page 1, 2nd paragraph lines 4-5). The applicant also stated that it was too difficult to select the claims that would read on the elected Species III, thus waving the right of selection, and giving the examiner the right to select them for the Applicant. The examiner selects claims 1-9, 20, 22, & 35-38 to be examined, since the withdrawn claims 15-19, 21, 23-34, and 39-42 teach a laminated/multilayered structure/ substrates, (Base layers where Figures 3A-B teach a single layered bottom layer), an organic adhesive, which the disclosure under Figures 3A-B do not teach, and zigzag heaters.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-9, & 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2. The examiner is unable to understand a third substrate, where the independent claim #1 does not illustrate what the first and second substrates are.

3. Claims 6 and 9 recites the limitation "electrodes". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-8, 20, 35, & 36 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0146200 Kudrle et al.

4. Referring to claim 1, a packaged microelectromechanical device, comprising: a microelectromechanical array device, (Figure 21 & 23C MEMS Die), that comprises a semiconductor substrate, (Figures 21 & 23C #404 Paragraph 0146 Lines1-4); a package for the microelectromechanical array device, (Figure 21 & 23C MEMS Die), the package comprising a packaging substrate, (Figure 23C Heat sink); and a **third substrate**, (Figure 23 C ceramic

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substrate), that is disposed between and bonded to both the semiconductor substrate, (Figures 21 & 23C #404), and the package bottom substrate, (Figure 23C Heat sink).

5. Referring to claim 2, a device, wherein the semiconductor substrate is silicon, (Figures 21 & 23C #404 Paragraph 0146 Lines1-4).

6. Referring to claim 3, a device, wherein the microelectromechanical array comprises a light transmissive substrate, (Figures 23C Antireflection coated window Paragraph 0152), bonded to the semiconductor substrate, (Figures 21 & 23C #404 Paragraph 0146 Lines1-4).

7. Referring to claim 4, a device, wherein the light transmissive substrate is glass or quartz, (Figures 23C Antireflection coated window Paragraph 0152).

8. Referring to claim 5, a device, wherein the microelectromechanical array comprises a plurality of micro mirrors, (Figures 23C MEMS die) formed on the light transmissive substrate, (Figures 23C Antireflection coated window Paragraph 0152).

9. Referring to claim 7, a device, wherein at least 500,000 micro mirrors, (Figure 21 & 23C MEMS Die), are disposed on the light transmissive surface, (Figures 23C Antireflection coated window Paragraph 0152 and Kudrle et al. is not limited to a maximum amount of mirrors).

10. Referring to claim 8, a device, wherein the microelectromechanical array, (Figures 21 not labeled, but can be seen), is formed directly on the semiconductor substrate, (Figures 21 #404 Paragraph 0146 Lines1-4).

11. Referring to claim 20, a device, wherein the third substrate, (Figure 21 & 23C ceramic substrate), is bonded to the semiconductor substrate with adhesives, (Figures 21 #404 Paragraph 0146 states that the layer could be bonded by bump bonding, which has adhesive properties).

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12. Referring to claim 35, a method comprising: attaching a microelectromechanical array device, (Figure 21 & 23C MEMS Die), having a semiconductor substrate, (Figures 21 & 23C #404 Paragraph 0146 Lines1-4), to another substrate, (Figure 23 C ceramic substrate), having similar mechanical property to the semiconductor substrate, (Figures 21 & 23C #404 Paragraph 0146 Lines1-4), using an adhesive, (Figures 21 #404 Paragraph 0146 states that the layer could be bonded by bump bonding, which has adhesive properties), so as to form an assembly; and placing and attaching said assembly to a packaging substrate, (Figures 23C heat sink), using an adhesive, (Paragraphs 0149 & 0150).

13. Referring to claim 36, a method, wherein the adhesive for attaching the microelectromechanical array with the semiconductor substrate to another substrate is deposited in an even layer covering at least 80% of said substrate surface, (Paragraphs 0149 & 0150).

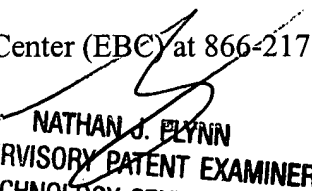
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor A Mandala Jr. whose telephone number is (571) 272-1918. The examiner can normally be reached on Monday through Thursday from 8am till 6pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
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VAMJ
9/24/04